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09/694,074	10/20/2000	Rebecca J. Jackman	H0498/7085 TJO	2002

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EXAMINER

PARKER, FREDERICK JOHN

ART UNIT PAPER NUMBER

1762

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/694,074

Applicant(s)

JACKMAN ET AL.

Examiner

Frederick J. Parker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 51-63 is/are pending in the application.
- 4a) Of the above claim(s) 63 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 51-62 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11/1/03.
- 4) ☒ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Response to Amendment

Election/Restrictions

1. The Examiner acknowledges cancellation of claims 1-50 and 64-82. The meaning of claim 63 being "withdrawn" in context is unclear and will be interpreted to be cancelled.

Claim Objections

2. The explanations of remarks page 6 and cancellation of claims in response to the Claim Objections of the Previous Office Action are acknowledged and appreciated, and the Examiner withdraws the objections.

Claim Rejections - 35 USC § 112

3. The claim cancellations and explanations in remarks page 6 to the 35 USC 112 rejections of the Previous Office Action are acknowledged and appreciated, and the Examiner withdraws the rejections. New rejections are necessitated by amendment.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 51,52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 51 is vague and indefinite because it is unclear (1) what is meant by "surface dimension", (2) to what surface the dimension refers (mask, article, etc) [for examination, mask feature will be interpreted], and (3) on line 3 it is unclear which portion of the mask corresponds to the surface of the article.
- Claim 52, "non-planar" lacks antecedent basis.

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6. The rejections of the previous Office Action are withdrawn in view of cancellations and amendments which require new or modified rejections as follows.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 51,53-55 are rejected under 35 U.S.C. 102(b) as being anticipated by Rustomji US 4511599.

Rustomji teaches a method anticipating claim 51 comprising masking a surface with a thin flexible mask, the mask having open (second portions) and reinforcing portions (first portions) including 7-10 mil features (col. 3, 31-34) which are "less than 1 mm", the openings defining electrodes; holding the mask flush and magnetically adhered to the substrate ("conformal contact"); and depositing metal vapor through openings to form the electrodes for an EL device. No degradation of the mask is cited, not can any occur without departing from the spirit and intent of the reference.

Rustomji further discloses the method comprises after first film deposition , shifting and re-orienting the mask relative to the metal deposition, to a second position where a second deposition is made holding the mask to the substrate, such that portions of the substrate previously covered are now coated, per claim 53 and 55. The first portion is unshielded per claim 54.

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Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rustomji.

Rustomji is cited for the same reasons previously discussed, which are incorporated herein. Applying a second coating agent is not cited. However, Rustomji teaches forming metal electrodes by vapor deposition without limitation as to number of coating agents applied to form the electrodes. Since electrodes are commonly formed of plural conductive materials, dependant on their intended function, the use of plural coating agents applied on a substrate would have been within the purview of one skilled in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rustomji by applying different metals to form desired properties of an electrode for a specific intend use.

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12. Claim 56-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rustomji in view of Smith US 4119745.

Rustomji is cited for the same reasons previously discussed, which are incorporated herein. Plural masks are not disclosed.

Smith similarly discloses forming electrodes for EL devices in which first and second overlaying masks are adhesively secured to a substrate ("conformal contact"), the first mask disposed against the substrate. The masks are disposed so mask apertures are aligned, and depositing coating material through the apertures. Masks may be plastic (same as "polymeric") and the use of flexible plastic for flush adherence to the substrate would have been obvious given the teachings of Rustomji, per claims 56-58. Plastic/ polymeric is inclusive of elastomeric polymers per claim 59. Removal of the top and second mask, followed by forming an additional electrode is further disclosed per claim 60. Removing and replacing sets of masks to form electrode patterns across a surface, per claim 61, would have been an obvious variation within the purview of the skilled artisan in view of the combination of references.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rustomji by utilizing plural masks as disclosed by Smith for an EL electrode forming process because of the expectation of forming complex electrode patterns on large EL substrates.

13. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rustomji alone, or further in view of Smith US 4119745.

Rustomji is cited for the same reasons previously discussed, which are incorporated herein.

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Formation of electrodes on a non-planar/ curved surface is not stated. Rustomji is not limited to planar substrates and further it is the Examiner's position the use of a flexible mask would have demonstrated that Rustomji at least contemplated curved substrates since flexible masks would have adhered flush to such substrate surfaces. Alternatively, Woodward teaches on col. 3, 37-45 the use of flexible masks for curved substrates. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to carry out the method of Rustomji on curved substrates because the use of flexible masks demonstrates Rustomji contemplated curved substrates, or alternatively, the use of the masks on curved surfaces would have been obvious in view of Woodward because it teaches the advantage of flexible masks for "contouring to the shape of curved substrates".

14. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hembree et al.

Hembree et al Rustomji is cited for the same reasons previously discussed, which are incorporated herein. Hembree conformally applies an elastomeric polymer mask, forming openings having a dimension (thickness) less than 1 mm therein, and applying metal through the openings to form a patterned coating. While the article appears planar, it is not so limited, and carrying out the process on a non-planar surface would have been obvious given the inherent flexible properties of the elastomeric mask.

Applicants argue that a "curved" surface is not taught. While the Examiner concedes this point, it is also true that Hembree is not limited to any degree of curvature or planarity of substrates, and since the elastomeric materials are non-rigid, it would have been obvious to carry

out the process of Humbree et al on curved substrates because of the expectation of successfully applying a conformal mask and application of metal depositions through the mask openings.

RESPONSE TO REMARKS

Applicants remaining claims 51-62 are rejected above as necessitated by amendment, so that rebuttal of remarks related to previous rejections is moot. The Examiner maintains that claims 51-62 are unpatentable.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

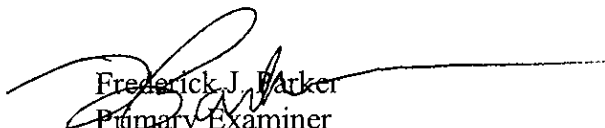
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on 571/272-1415. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703/308-0661.



Frederick J. Parker
Primary Examiner
Art Unit 1762

fjp